options, if not the only option, which will provide access to land and credit and generate cash income.

Table 6 provides data on the areas planted to opium in Afghanistan, as recorded by the UN Drug Control Programme Annual Opium Survey (UNDCP). The survey data show that total planted area was relatively stable at between 50-60,000 ha during the four years 1995-98. However following a low yielding season in 1998, there was an increase of over 40% in planted area in 1999, to 91,000 ha. In 2000, the planted area fell by 10% to 82,200 ha, which was still the second highest area recorded. Equally important to the increase in planted area is the number of new poppy producing provinces in the eastern region and the shift in plantings across the Hindu Kush into a number of norhtern provinces in recent years.

Table 6. Opium poppy cultivation (ha) Afghanistan 1994-2000

District	1994	1995	1996	1997	1998	1999	2000
Badakhshan	1714	2970	3230	2902	2817	2684	2458
Badghis	0	0	0	0	0	0	41
Baghlan	0	0	0	328	929	1005	199
Balkh	0	0	1065	710	1044	4057	2669
Farah	n/a	9	630	568	171	787	1509
Farayab	0	0	0	0	0	0	36
Helmand	29579	29753	24909	29400	30673	44552	42853
Herat	0	0	0	0	0	0	38
Jawzjan	0	0	0	0	0	2593	746
Kabul	0	0	0	0	0	132	340
Kapisa	0	0	0	0	0	5	104
Kunar	115	152	19	0	75	288	786
Kunduz	0	0	0	0	0	38	489
Laghman	0	0	0	0	77	297	707
Logar	0	0	0	0	4	29	46
Nangarhar	29081	15722	15643	14567	17822	22990	19747
Nimroz	682	119	136	642	11	203	219
Oruzgan	6211	2573	7777	4587	4288	4479	4331
Qandahar	4034	2461	3160	4521	5602	6032	3427
Samangan	0	0	0	0	0	0	54
Takhar	0	0	0	0	0	201	647
Zabul	54	n/a	255	154	161	611	725
Total	71470	53759	56824	58379	63674	90983	82171

Source: UN Drug Control Programme, Annual Poppy Surveys 1994-2000

Those involved in poppy production form a large and diverse group. Producers include large landowners, owner-farmers and landless households who farm as tenants or sharecroppers. Production also involves a large body of itinerant labourers who do much of the harvesting. The mobility and experience of this last group, and their skill in production and harvesting have a significant influence on the movement of poppy production into new areas. The marketing pathway may include large dealers, professional traders, local shopkeepers, farmers, or itinerant speculators.

Farmers grow opium as the best option for coping with the myriad difficulties they face in feeding their families. Crop yields on much of the irrigated land are below potential because the irrigation infrastructure is in poor condition with little regular maintenance. Markets for outputs other than opium are at best uneven and often non-existent, so it is difficult to generate cash through normal cropping systems. There is little private capital and no formal system providing credit. Where credit is available, there are no controls to influence the behaviour of lenders or to protect the position of borrowers. Recent survey data shows farmers paying 25% to 50% price premiums for fertiliser bought on credit compared to the open market price. For those who have fallen below the economic independence line, producing opium offers an option to obtain credit, create savings, and gain access to land

and a cash income with which to feed a family. A strategic approach to the complete reduction of opium poppy production must deal with a number of issues, all of which are closely linked to food security.

It is important to note that in July 2000 the Taliban authorities issued a decree imposing a total ban on poppy cultivation. A pre-assessment survey conducted by UNDCP, in 51 districts of the seven provinces (Helmand, Nangarhar, Oruzgan, Qandahar, Farah, Laghman, and Kunar) that account for 86% of national total opium production in 2000, indicates that there has been effective implementation of the ban. The surveyors were able to find only an aggregate of 27 hectares of opium poppy cultivation in Nangarhar district. Given the fact that opium cultivation provided a low-risk enterprise in the generally high-risk environment of Afghanistan, there is need to develop/support alternate agricultural and other income-generating activities in the post-opium cultivation ban scenario, to offset its negative income effect on the local population. The adverse impact in terms of access to informal credit opportunities in the absence of poppy cultivation also needs to be recognised, and alternate community-based micro-credit schemes introduced. Moreover, it must be recognised that the poppy cultivation ban provides an opportunity for food security interventions that have traditionally been avoided by the donor community because they might inadvertently facilitate poppy cultivation, most notably investments in the rehabilitation, completion, and extension of irrigation schemes. In sum, the poppy cultivation ban has created opportunities for an expanded menu of food-security promoting interventions, while improved food security and associated economic and income gains will greatly facilitate maintenance of the opium ban.

3 THE STRATEGIC APPROACH

3.1 VULNERABLE GROUPS

Food security in Afghanistan is very much an issue of access to resources and economic opportunity. For the rural households who make up 80% of the population, it is particularly a matter of access to land and water as the basic resources from which to produce their own food. For the urban and non-farming rural population and the landless households in rural areas, the crucial issue is the economic opportunity to earn a living through productive work.

The strategic approach to food security therefore starts by identifying the size and location of the population and defining the various population groups in terms of their capacity to cope with food insecurity. In the context of Afghanistan, this capacity depends not only on who they are, but where they are. Distance and poor infrastructure can significantly influence what resources individuals can command to produce or buy their own food needs. There are also significant differences between rural and urban-based groups in the coping strategies available for food insecurity problems.

Table 7 sets out data on the estimated settled population by province in 1996, grouped according to the urban and rural proportions.[4] There are significant local differences. Overall national proportions are 80% rural and 20% urban, however Kabul has nearly the reverse, with 79% urban. The other major urban areas are Qandahar (35% urban), Mazar-i Sharif (26% urban), Herat (24% urban) and Kunduz (21% urban). These five provinces account for one-third of national population but over 80% of the urban population. The nine provinces at the other end of the scale account for 17% national population but have virtually no urban component. Even these areas though, have significant numbers of those without resources and with no means by which to feed themselves.

Table 7. Estimated settled population by province and location 1996 ('000 persons)

Urban proportion	Population Rural	Urban	Total	Rural %	Urban %	Province
High	3104.0	2972.0	6076.0	51.1	48.9	Kabul, Qandahar, Balkh, Herat, Kunduz
% national	21.4	82.3	33.6			
Intermediate	3794.3	425.4	4219.7	89.9	10.1	Baghlan, Jawzjan, Faryab, Takhar, Nangarhar, Farah, Sar-i-Pul
% national	26.2	11.8	23.3			
Low	4543.3	184.3	4727.6	96.1	3.9	Nimroz, Helmand, Parwan Ghazni, Paktia, Zabul, Bamiyan, Badghis, Logar, Samangan, Badakshshan
% national	31.4	5.1	26.1			
No Urban	3035.1	30.5	3065.6	99.0	1.0	Laghman, Oruzgan, Kunar, Ghor, Khost, Wardak, Paktika, Kapisa, Nuristan
% national	21.0	0.8	16.9			
Total	14476.7	3612.2	18088.9	80.0	20.0	

Source: Estimated Population of Afghanistan 1375 (1996-97) Central Statistical Office, Kabul

To target possible food security assistance interventions, the population can be divided into three broad categories representing their general level of food security. These categories apply regardless of whether people live in rural or urban areas, though their strategies for coping with food insecurity will be heavily influenced by their location. The groups are:

(i) those who are capable of being food self-sufficient;
(ii) those who are potentially or marginally self-sufficient; and

4 The estimates were prepared by the Central Statistical Office, Kabul in 1997. They are based on the last full national census (1978) with adjustments for subsequent population growth, changes due to displacement of communities during fighting and the disproportionately high male death rate from the civil war. Data does not include the nomadic (*kuchi*) population.

(iii) those who have limited or no opportunities to provide for the needs of themselves and their families at an acceptable level.

Within each broad category, a series of subgroups can be identified, based on the level of resources they control and their likely capacity to respond to actual or potential opportunities to meet their food security needs. The groups and subgroups are:

Self-sufficient:
- Large landowners, merchants and traders with significant non-farm incomes
- Medium to larger farmers who own or rent sufficient land to at least provide for their food needs; traders and shopkeepers with medium or large-sized businesses; persons employed in salaried positions whose employer can afford to regularly pay their wages
- Kuchi (pastoral nomad) families with medium to large livestock herds

Potentially or marginally self-sufficient:
- Medium to small farmers with insufficient owned or rented land, or unreliable irrigation
- Sharecroppers with some resources, such as draught animals or other livestock
- Kuchi families with medium to small, but productive, livestock herds
- Rural or urban households with one or more members locally employed, or in distant employment sending home remittances
- Government employees actually receiving a salary
- Urban households with one or more members having some employment opportunities

Rarely or never self-sufficient:
- Farm labourers working on a labour-only crop-share basis
- Kuchi families with small, unproductive livestock herds, or no livestock
- Urban or rural landless families with unemployed adult men
- Ex-government employees with formal training who have no land or current livelihood
- Urban or rural landless families without adult men

While these groups can be seen in terms of a hierarchy of access to resources and self-sufficiency, they are not mutually exclusive nor necessarily permanent. There are specific interdependencies between certain groups such as the large landowners and the sharecroppers, who combine to grow food for their mutual benefit. The extended family also plays a role in food security. Widowed families may live within an extended family and be assisted with food by relatives in better-off male-headed households.

Since it is access to resources which defines food security, the divide is between those who actually or potentially control enough resources to provide for themselves, and those who do not. To improve food security, external assistance should aim to move this dividing line as far down the hierarchy of food insecurity as possible. Possible actions could include increasing the productive capacity of the resources available to groups at risk, or by generating economic activity which will provide gainful employment. This latter activity is crucial to strengthening food security for the vulnerable urban-based groups. Raising productivity levels across the agricultural sector also increases the capacity to produce surpluses for sale to the non-farming and urban groups.

3.2 ACCESS TO ASSISTANCE

Geographic location is a key criterion in identifying appropriate strategies for strengthening food security. In Afghanistan, location not only sets the climatic and technical limits to production but generally defines access to services, inputs and markets. The population is widely scattered in the agricultural areas. While many live in large, densely populated districts, others are isolated in small communities, remote from large population centres.

In terms of access, six stylised locations are identified for strategic planning purposes. These are not geographic places but represent combinations of agricultural (food producing) potential and access to services. Typical places can be found for each of these locations, though there are often no clear cut-off points between them. Indeed, the gradation from a highly productive central area to marginal surrounds is a common feature of Afghan agricultural areas. The stylised locations are:

1. **Accessible, high productivity:** This location represents the densely settled areas around the main cities where agricultural potential is high and there are adequate roads and services. These are climatically favoured areas with good water supply. Typically these include the areas around Kabul, Qandahar, Mazar-i Sharif, Herat and Kunduz. Clearly there is a link between the size and historical longevity of particular cities and the productivity of the surrounding areas. On a somewhat lesser scale, the same city-countryside links can be found in cities such as Jalalabad, Shirbarghan and Taloqan. Girishk and Lashkar Gar are exceptions to this rule in that they are newer and smaller, but serve the highly productive Helmand irrigation scheme.

It is appropriate in these locations to maximise the productivity of the scarce resources of water and land by using high technology inputs. Here farmers mostly operate with high productivity irrigation systems and are well placed to take up the high technology options to increase food supply. Farming can be a commercial because roads and towns provide accessible markets to convert output to cash. The high population levels and existence of civil infrastructure provide a basis for investment in economic development and job creation.

2. **Distant, high productivity:** Typically the outer fringes of Location 1, but where poorer roads and infrastructure limit access to services. For these farmers, the poor state of public infrastructure means that access to inputs and markets is more difficult, prices are higher and supply less reliable. The location includes the more favoured areas of Ghazni, Paktia, Paktika and Zabul, the mid-to-upper reaches of the tributary valleys to the Kabul river (Kunar, Laghman, Logar and Wardak) and Farah in the west. The lack of development in historical provinces such as Ghazni and Paktia is a function of their less productive climate, more limited water resources and relative remoteness.

3. **Rainfed areas:** Mostly the northern foothills and plains in an arc from Badghis, Faryab, Jawzjan, Samangan to Baghlan. Also includes some of northern Qandahar

Under the conditions found in Locations 2 and 3, high technology options are less economically attractive, or simply less possible. Similarly, selling product is more difficult and costly. The combination of distance and poor infrastructure creates significant limitations for economic development which in turn imposes limits on economically sustainable job creation prospects.

4. **Distant, lower productivity:** The outer fringes of Location 2, where increasing altitude makes the growing season shorter, irrigable areas are smaller and water resources less reliable. Very poor or non-existent civil infrastructure. Most of Oruzgan and the higher parts of Zabul, the upper reaches of Kunar, Kapisa, Parwan and Nuristan.

5. **Remote, high altitude:** The Hazarajat (Bamiyan, Ghor) and Badakhshan, where a combination of poor roads, long distances and short growing season make economic activity and food self-sufficiency a continual struggle.

These locations cover the remote communities in mountainous provinces. Here transport at best is by donkey or camel, travel is by walking, and there is little real chance of gaining access to inputs, services or markets. These areas often have limited water resources and significant climatic constraints to production. For farmers in these areas, the difficulties of

obtaining inputs and services mean that across-the-board application of high technology solutions is not a realistic option. These areas have always been economically deprived. Apart from low-productivity farming, getting a job almost automatically means leaving the district to work in some distant area and send remittances home.

6. **Urban areas:** Particularly Kabul, but also the cities of Qandahar, Herat Mazar-i-Sharif and Kunduz. Because of its proximity to Pakistan, Jalalabad is something of a special case as there are greater opportunities for economic activity and employment.

In food security terms, the urban areas are a special case. The urban population has no real prospect of producing their own food and are inherently dependent on non-farm economic opportunities.

The linkages between the various food security groups, their location and opportunities for food security are set out in the form of a strategic activity matrix in Table 8. The table presents in a compressed format the linkages between possible agricultural and other activities and the interventions which are thought most likely to assist the various groups in meeting their food security needs in the different locations. The major emphasis in the table is on activities to strengthen food security by food production, where the choice of appropriate activities will vary according to location. For the most vulnerable groups who appear at the bottom of the table, the solutions are the same regardless of location, that is, economic development to provide non-farm employment.

Table 8. Strategic activity matrix for food security by group and access to resources

Category	Access to resources		
	Accessible Location 1	Distant Locations 2+3	Remote Locations 4+5
Self sufficient - large landowners, merchants, traders - medium to large area farmers - persons in regularly paid employment - kuchis with medium to large flocks	Group who are best placed to utilise present approaches to high-technology interventions	High-technology solutions, but possibly at lower production levels and marketable surplus	Major emphasis on livestock as food source. Use better yielding low-input crop options Develop remote
Marginally self-sufficient - medium to small area farmers - sharecroppers and kuchis with some resources - households with part-time employment or remittances	with surplus output which can be marketed	Help with better technology but will need support	area economic activity to assist food security
Not self-sufficient - farm labourers working on share basis - kuchis with few or no animals	with micro-finance and access to inputs. Also increased economic activity for jobs		Location 6 and non-farm rural population
- urban or rural landless with unemployed adult men - ex-government employees with no job or land - urban or rural landless families without adult men	The group most at risk from food insecurity. Best assisted by increased economic activity, off-farm wage employment or in-home activities, to earn cash income to buy food.		

The activities and interventions should be seen as neither mutually exclusive nor prescriptive. The purpose of the matrix is to provide a broad spatial perspective of how the options for food security actions can be linked to the diverse groups in the Afghan population in the wide range of locations and circumstances in which they live.

4 ISSUES

There are a number of significant policy issues which will influence the extent and rate at which food security can be stabilised and strengthened on either a regional or national basis. Some of the most important topics are discussed below.

4.1 VULNERABILITY

A focus on assistance to the most vulnerable groups is a key principle of the strategy. While the statement and its implications are unequivocal, if the strategy is to achieve its aims defining who are the vulnerable groups will need to be treated flexibly over time. In terms of general vulnerability to food insecurity, the hierarchy of categories in the strategic activity matrix in Table 8 should be read from the bottom up. Clearly, those groups who fall in the 'not self-sufficient' categories at the bottom of the table are the most vulnerable and have the least defences against adversity.

While the position of individuals on the hierarchy is not necessarily fixed or permanent, the evidence is that increasingly households are sliding down the scale. In rural communities the progressive subdivision of small rural holdings amongst ever-larger families is increasing the pressure on resources and reducing the capacity for self-sufficiency. Estimates over a number of years indicate that in the past landless households in rural areas comprised some 20% to 30% of communities, with some areas up to 40%. The current indications are that these proportions may be growing on a permanent basis.

In assessing vulnerability, the 20% of Afghan households who live in urban areas must be looked at differently to the 80% who live in rural areas. These households have a different order of vulnerability to their rural counterparts, as they have no prospect of subsistence-style self sufficiency. In the past a significant number of urban-based wage earners were in government employment, which has largely disappeared. The development of the non-rural wage economy is their only realistic hope of recovering a degree of food self-sufficiency. Accordingly, addressing the issue of non-rural employment is a key element in developing strategies for food security for these groups.

The extent to which the food self-sufficiency hierarchy is unstable is bought into a stark relief by the current drought. Now entering its third year, it is estimated that nearly a million people are suffering from the drought impacts. In this case it is whole communities, not just the most vulnerable who are trapped in food insecurity. Many of those caught in its effects have their own land and have struggled for one or two years with declining crop output and dying animals. Having exhausted their survival strategies, they have been forced to move from their villages to seek relief. When the drought breaks and they are able to return, they will have no seed or other resources from which to re-start the process of food self sufficiency.

4.2 TIME FRAME

Food security cannot be created, and most certainly cannot be sustained, with only short-term interventions. Implicit in creating a sustainable food security capacity is the willingness of the international stakeholders to participate in planning and funding the implementation of medium- or longer-term programmes to meet food security goals.

For the past ten years, international assistance to Afghanistan has been almost entirely of a short-term humanitarian nature. The desperate consequences of 20 years of military occupation and civil war have focused the emphasis on a range quick interventions to deal with immediate problems. This situation has been compounded by the lack of a functioning government and any national medium to longer-term planning or implementation capacity.

There are now mechanisms to support medium or longer-term planning for Afghanistan. The creation of the APB and Regional Planning Boards (RPBs) and the introduction of Principled Common Programming (PCP) between the UN agencies, has brought about more coordination between donors, agencies and NGOs in terms of both approaches and delivery. In terms of the food security strategy, the improved coordination capacity between donors

and agencies is supported by a group of NGOs with a proven in-country capability to implement projects.

4.3 DELIVERY CAPACITY

A number of services are needed to increase the quantity and security of the food supply. Most needed amongst these are: (i) improved technical inputs (seed, fertiliser, agricultural chemicals and veterinary medicines and services); (ii) quality control of inputs; (iii) extension services to raise farmers awareness; and (iv) short and long-term training capacity. At the broader community level, the key services needed include: (i) potable water; (ii) sanitation; (iii) health; (iv) education; and (v) community strengthening activities. In urban areas the latter have important links to small-scale economic development and job creation.

The agency-donor link to NGOs as implementing partners (IPs) providing services, is well established. A number of NGOs are recognised as key providers of particular technical services. Usually individual NGOs work in selected geographic areas, which has led to some areas being well serviced while others have little or no services available.

Any medium-term approach to strengthening food security will need to address the issue of implementation capacity. While the capability of NGOs as service providers is well recognised, to date donors have rarely been willing to support institutional capacity building activities with NGOs. Many agencies are locked into writing short-term contracts with IPs. However, to build a strong and well trained staff, NGOs need a greater long-term certainty of work. Similarly, longer-term support is needed to encourage IPs to move to currently unserviced or remote areas. Longer-term contracts would better enable IPs to create the necessary capacity rather than the current short-term contracts. There is scope for coordinated activity between agencies, donors and NGOs to create a better quantity and quality of much-needed services to strengthen food security at the community level.

4.4 COMMUNITY DEVELOPMENT

Food security has a broader meaning than just having enough to eat. Implicit in the strategic approach to medium- or longer-term food security is the concept of communities with sufficient social capital and civil capacity to enable the storage and distribution of food and the provision of support and care for the most vulnerable. Much remains to be done in rebuilding the social and civil infrastructure to a level where communities are capable of underpinning their food security by making and implementing rational decisions on their collective welfare.

Given the capacity of community-based organisations (CBOs) as a focus for local activity, community mobilisation and empowerment should be part of any food security programme This will involve providing appropriate incentives and catalytic support to strengthen the sustainability of CBOs. Emphasis should be placed on: (i) local institution-building and social capital formation by involving the CBOs directly in programme implementation; (ii) asset-building activities and incentive schemes for initiative-taking and wealth-creation; and (iii) by fostering continued deepening of interaction among CBOs and other local actors. A long-term objective should be the development of sustainable CBOs, such as, *shuras*, community forums and common interest groups such as farmers' crop committees, which are capable of planning and implementing various development projects and services.

At the local level, the CBOs should provide the link for needs identification, development planning, credit provision, income generation and training. Building the capacity of CBOs to devise district and regional development plans will also become important. Strengthening the capacities of local communities and other civil society organisations to plan, articulate and implement local development priorities are crucial in empowering them to contribute to

their own food security through better governance. Particular emphasis should be given to activities that have a better prospect of internalising their management within communities and interest groups. In terms of food security, the development of common community empowerment guidelines is also expected to promote the sharing of 'best practices' and limit incentives for competition or 'moral hazards' among collaborating partners. Common standards could also be developed for in-kind and in-cash contribution to income-generation schemes by communities.

4.5 THE POVERTY DILEMMA

There is an obvious link between poverty and food insecurity. In Afghanistan the problem of urban poverty presents a serious policy dilemma for donors and agencies. In the absence of recognised state mechanisms, the international community has not been prepared to take on the state's responsibility for the welfare of its citizens. That is to fund at the scale required, the provision of a basic minimum level of social services, despite this being a right enshrined in various UN conventions. The burden of drought on top of the economic collapse and continued fighting has brought the situation to crisis levels. People are suffering from the lack of services and dying of cold and hunger. Requesting humanitarian assistance through mechanisms such as the Common Appeal is too little too late.

Under pre-war conditions, the formal state sector was by far the largest urban employer, covering areas such as administration, the judiciary, planning, engineering, health and education. With the collapse of the state, the loss of this employment has directly affected family purchasing power. In turn this has affected the market for rural produce and thus people's food security, in both rural and urban areas. In addition, it has meant the loss to the economy of key elements of social welfare such as health, education and infrastructure operation and maintenance which has in turn contributed to the vicious cycle leading to the chronic conditions now faced by the Afghan population.

With little commercial investment in construction in either urban or rural areas many people are unable to find casual work. In the absence of the state there is a role for the assistance community to develop programmes to directly employ large numbers of people in productive work. This could include civil works projects for men and for women (and men separately) and small scale manufacturing either at home or in small to medium scale production centres. With sufficient capital investment, training and market linkages these could develop into viable and sustainable livelihood opportunities in the manufacturing and processing sector. Where the private sector is currently unwilling to take the risk, the assistance community needs to take a lead to mitigate the crisis as people's coping capacities are stretched to survival limits.

Setting aside the immediate concerns for poverty-linked assistance, current experience in Afghanistan provides scope to raise this policy dilemma at the highest international levels. There must be a searching review and debate on the need for funding a basic minimum provision of social service based on Human Rights conventions and the new reality the world faces of failed and rogue states. A study could be undertaken to assess what the order of actual costs would be and compare these to the opportunity costs and future costs that the international community will face once all costs are taken into account. These would include the lack of an educated workforce, the spread of human and animal diseases, the loss of life and the impact on other regions and on future generations.

4.6 CREDIT

In a society which has lost most of its personal savings and assets, developing access to credit is an important element in assisting growth. Access to short-term credit is a key to assisting farmers take up high-cost inputs such as quality seed and fertiliser. Similarly,

access to credit would enable urban-based individuals, households and CBOs to undertake job-creating investments, thus starting a positive cycle of economic opportunity.

If micro-credit programmes are to alleviate poverty and not just increase the growing disparity between those with and without access to resources, there is a need to develop local redistribution mechanisms such as through community development programmes. Credit should be developed in step with local customary law so that communities are able to hold people accountable to commitments made to return loans. This is essential in such an unstable environment and especially in urban areas where social cohesion is weaker as people are not necessarily permanently settled and are more autonomous and independent.

There is also a need to recognise the fact that riba (interest) is considered haram (illegal) by the Taliban authorities. However, this may not be a limiting factor in implementing micro finance schemes in Afghanistan. NGOs and UN agencies are presently disbursing micro-credit at the grass-root level using Islamic financing instruments. Similar interventions based on Islamic modes of financing have also been successfully implemented in Sudan.

4.7 SUSTAINABILITY

One of the underlying concerns of the food security strategy is whether uncertainties such as lack of government, poor resource utilisation, weak capacity and lack of credit are sufficient to render any rehabilitation and development gains made unsustainable. The strategy takes the view that they do not render potential interventions ineffective. To be successful, however, interventions must be planned recognising these limiting issues. For sustainability, it is necessary at all times to ensure that the beneficiaries of any interventions are not left dependent on any of these weak or non-existent bases for their ongoing performance.

A succession of former governments boosted the use of improved seed and fertiliser through providing them at subsidised cost. They also provided services such as farm machinery and canal cleaning at subsidised rates, all of which were paid for by using money from a variety of foreign sources. After the foreign funds ran out, government maintained its range of services to the community by printing money. Eventually it all collapsed and the community, including the farmers have been left with nothing.

The strategy is based on the view that on a long-term basis, inputs and services must be provided at real cost and that the market prices of farm outputs should properly reflect the cost of production. Subsidies must ultimately be paid for by someone. It is recognised that there may be particular circumstances in which farmers cannot afford the full cost of inputs. Agencies or donors who see fit to provide subsidised inputs should consider some form of transitional programmes over a period to cover the withdrawal of subsidies. Where there are particular reasons why farmers cannot pay the full cost, such as for returnees, then the subsidies should be open and transparent, so that all, including the farmer, can see the relationship between the cost being paid by the farmer and the real cost.

1 STRATEGY DEVELOPMENT

1.1 INTRODUCTION

Secure access to sufficient food is a basic human right. After more than 20 years of civil war and the accompanying destruction of infrastructure and the environment, the people of Afghanistan are struggling to sustain themselves. This problem must be seen against the background of a country that in the pre-war years was largely self-sufficient in food and a significant exporter of high quality fruit, silk, cotton and other agricultural products.

Since the collapse of the Communist government in 1992, substantial international assistance has been given to Afghanistan to enable the return of refugees and the re-establishment of agricultural production. Of necessity, much of this has been short-term, aimed at the rapid rehabilitation of basic productive resources damaged and destroyed during years of fighting. The results were encouraging. Within five years from 1992, the country produced an estimated 70% of its own food needs. However, the 1999-01 drought has shown how fragile those gains were, with people once again forced from their homes by the prospect of starvation.

It need not be so. The Afghans are competent and hard working farmers. Given the opportunity they have the capacity to produce much of the national food requirements. Political stability is an important factor for increased food production, but what is also needed to bring this about is an adjustment in the priorities for international assistance. Short-term and humanitarian assistance are of critical importance to the strategy. So too are longer-term actions to make the country more self-reliant and less dependent on emergency aid. This Strategy is a framework for action to meet that goal.

Encouraged by the Afghanistan Programming Body (APB), an informal team has taken up the work of developing a medium-term operational food security strategy. It is building on the ongoing work of individual agencies and two working groups dealing with food security issues. The team consists of representatives from Food & Agriculture Organisation (FAO), World Food Programme (WFP), United Nations Development Programme (UNDP); several Afghan Support Group (ASG) members including Switzerland, United States, European Union (EU) and the Netherlands; non-government organisation (NGO) representatives coordinated by MADERA; and with the World Bank playing a facilitating role. This Food Security Strategy is the result of the work of this group.

1.2 CURRENT SITUATION

Food security in Afghanistan has deteriorated markedly during the past two decades. The current drought has added a further burden to a series of adverse long-term trends. These include protracted conflict, the erosion of the agricultural production base, loss of irrigation and other infrastructure and declining non-agricultural income generation opportunities.

Afghanistan's grain production has fallen by more than 50% in the last two years and now meets less than half of total national grain requirements. Water tables are declining alarmingly in many parts of the country due to the drought and excessive, uncontrolled harvesting of groundwater. Livestock herds, an important asset and safety net, have been severely depleted. Close to a million people are estimated to be vulnerable, hungry, and at risk due to loss of their agricultural output, combined with lack of other opportunities to earn enough money to pay for essential food. There have been substantial population movements out of drought-stricken areas into the already-poor cities where real wage rates are declining, and also outmigration to neighbouring countries.

5 THE STRATEGY

5.1 STRATEGIC FRAMEWORK

The Food Security Strategy takes a medium to long-term and open-ended view of actions which will enable the Afghan people to create and sustain their own food security. It embraces both the urban as well as the rural sector, which means it that it has a much broader framework than agricultural production alone.

Afghanistan is a country with a harsh and uncompromising climate. It is dependent on a relatively small proportion of its land for the survival of the population. The starting point must therefore be to utilise and protect for the long-term, those scarce national resources which form the productive base for agriculture. Beyond that however, the strategy seeks to create the conditions whereby the fifth of the population in urban areas have the opportunity for the level of economic independence which would bring with it food security.

Specific proposals are made to strengthen national food production and to assist households to provide for their own food needs. The strategy provides a guide to where individual interventions or projects are needed and to whom they should be directed. It is presented within the following framework:

Goal: Over the medium-term, to develop productive, sustainable agricultural systems, based on the sound long-term utilisation and management of natural resources and to develop other economic activities which will provide secure access to sufficient food to meet the needs of Afghan households as far as possible from within the national resources. In the short-run, ensure that the minimum food needs of vulnerable elements of the population are covered and to minimise damage to the agricultural production base.

Objectives: The short-term objective is to provide humanitarian assistance where necessary to save lives. The medium-term development objectives are to obviate the need for such short-term assistance by: (i) fostering food security by assisting agricultural development and protecting natural resources; and (ii) promoting economic activity to strengthen markets for agricultural produce and to foster investment to create employment opportunities, enabling individuals and households to have more chance of being food secure.

Interventions: and activities: Each development objective can be translated into a series of immediate objectives and activities (projects) to bring about the intended results. They include raising agricultural productivity and managing natural resources to enable agriculture to be sustainable; promoting agricultural markets and economic activity to expand employment and raise skill levels to improve labour productivity.

Intervention level: The intervention level indicates the level at which any particular project activity will take place. This may be at farm or household level, or village, town, district, regional or national level. In recent years the most effective level has been the household and the village, as assistance can go directly to the recipient and is largely unaffected by the lack of government. As interventions move to a broader scale of district or regional level, they become more dependent on infrastructure and interaction with the authorities.

Technical: approach — Indicates the overall technical thrust of a particular group of activities. These could involve increasing resources used, intensifying agricultural production systems, facilitating access and improvements in market operation, increasing investment and employment or developing and implementing strategic policies.

Target group: — This indicates the principal groups to whom the assistance would be directed. The proposals are indicative only.

The objectives, activities, intervention level, approaches and target groups are summarised in Table 9. The interventions and activities outlined are at programme level. The project level activities within such programmes are described briefly in Sections 5.2 and 5.3 following and are summarised in Table 11 to Table 18.

Table 9. Objectives, activities, intervention level, approaches and target groups

Objectives	Interventions and activities	Intervention level	Technical approach	Target group
Objective 1. Improving Food Security				
Immediate Objective 1.1 Protect lives through food aid	Deliver food assistance to poor and needy Food-for-work to strengthen long-term recovery and production	Vulnerable groups/IDPs	Humanitarian assistance	Refugees/IDPs Urban/rural poor
Immediate Objective 1.2 Raise agricultural output	Raise crop technology through extension and better husbandry Improve animal health, husbandry and nutrition Increase crop/livestock integration Improved grazing land utilisation/management Increase horticultural and agroforestry activity/production	Farms and households villages towns and regions	Make existing resources more productive	Farmers Farmers/kuchis Farmers/kuchis Farmers/kuchis Farmers
Immediate Objective 1.3 Natural resource management	improve irrigation efficiency to increase/stabilise food production Develop regional water resource management policies/actions Develop community-based and regional forestry activities	Farms villages towns and regions	Sustainable natural resource use systems	Farmers/Mirabs Wakils/Reg'nl Govt Communities and Regional Govt
Objective 2. Raising Economic Development				
Immediate Objective 2.1 Improve agricultural markets	Facilitate local and export agricultural market development Increase farmers access to relevant market information	Households villages towns regions	Improve information flows	Farmers/Traders Farmers/Traders
Immediate Objective 2.2 Increase economic activity and investment	Improve financing small to medium-scale investment Develop group-based micro-finance schemes Raise employment opportunities for economic development	Communities urban areas and regions	Facilitate finance and opportunity	Farmers/Traders Rural/urban poor Rural/urban poor
Immediate Objective 2.3 Increase productive skills	Raise farm household/workforce productivity/employment Raise opportunities for employment through skills development	Communities urban areas and regions	Employment increased through skills development	Rural/urban poor Rural/urban poor

The two objectives include a broad range of activities and interventions. Not all are equally relevant among the various potential beneficiaries, nor will they apply with the same force across all locations. It therefore becomes an important issue to set priorities between the many options for activities available. In setting priorities it is also important to identify the likely flow-on effects of particular actions and the sequential linkages which may occur in order to ensure that the benefits available are properly realised in a sustainable manner.

Table 10 explores possible priorities for the principal activity areas of the Strategy and the likely linkages between the various elements. Clearly there is a direct link between improving crop production (1.2.1) and improving irrigation efficiency (1.3.1). While either could be implemented on a stand-alone basis, if implemented in a planned sequence, each would reinforce the other. Improving livestock productivity (1.2.2) links directly to increased crop/livestock integration (1.2.3) and improved grazing land utilisation/management (1.2.4).

Food-for-work may be used as an emergency humanitarian measure for short-term benefit (1.1.2). However, it can have significant additional long-term benefits if directly linked to

major repairs to irrigation systems (1.3.1) or rehabilitation of the urban environment (2.2.3). Priorities will differ between the urban and rural communities. In rural areas the obvious emphasis is on increasing sustainable food supplies. In urban areas, the priority must be to create jobs so that people have economic independence to buy the necessary food.

Table 10. Priorities by group and linkages for objectives and activities

No.	Interventions and activities	Priority by Group		Flow-on linkages
		Rural	Urban	
1.0	**STRENGTHENING FOOD SECURITY**			
1.1	**Immediate Objective 1.1 Protect lives through food aid**			
1.1.1	Deliver food assistance to poor and needy	High	High	
1.1.2	Food for work to strengthen long-term recovery and production	High	High	1.3.1+2.2.3
1.2	**Immediate Objective 1.2 Raise agricultural output**			
1.2.1	Raise crop technology through extension and better husbandry	High		1.2.3, 1.3.1
1.2.2	Improve animal health, husbandry and nutrition	High		1.2.3+4
1.2.3	Increase crop/livestock integration	High		1.2.1+2
1.2.4	Improved grazing land utilisation/management	Medium		1.2.2
1.2.5	Increase horticultural and integrated agroforestry activity and production	Medium		
1.3	**Immediate Objective 1.3 Natural resource management**			
1.3.1	Increase/stabilise food production by improved irrigation efficiency	High		1.2.1+3+5
1.3.2	Develop regional water resource management policies and actions	Medium		1.2.1+1.3.1
1.3.3	Develop community-based and regional forestry activities	Medium		1.2.5
2.0	**RAISING ECONOMIC DEVELOPMENT**			
2.1	**Immediate Objective 2.1 Improve agricultural markets**			
2.1.1	Facilitate the development of local and export markets for agricultural products	High	High	1.2.1+3+5
2.1.2	Increase farmers access to relevant market information	Medium		2.1.1
2.2	**Immediate Objective 2.2 Increase productive skills**			
2.2.1	Raise productivity and employment capacity of the household and workforce	High	High	2.2.3
2.2.2	Raise the opportunities for employment through skills development	Medium	High	2.2.1+2+3
2.2.3	Facilitate development of community-based mutual assistance organisations	High	High	
2.3	**Immediate Objective 2.3 Increase economic activity and investment**			
2.3.1	Improve ability to finance small to medium-scale productive investment	High	High	
2.3.2	Raise the opportunities for employment through economic development	Medium	High	2.2.2
2.3.2	Develop group-based micro-finance schemes for investment and job creation	Medium	High	2.2.1

5.2 OBJECTIVE 1. IMPROVING FOOD SECURITY

5.2.1 Protecting Lives

Regardless of any medium-term perspectives, there is a short-term food security crisis in Afghanistan which must be addressed. The drought conditions which have overtaken much of the country in 1999 and 2000 have led to severe food insecurity, including serious and widespread food shortages in parts of the country. The yields of many irrigated crops have been severely reduced, while most rainfed crops failed. Many households in these areas have already been forced to move. Increasing numbers are arriving every week at major centres such as Herat and Kabul. The first objective of the food security strategy therefore is to protect the lives of Afghans who are at risk as a result of the current climatic conditions and associated agricultural production shortfalls. While doing this, wherever possible interventions should also pave the way for the future revival of agricultural production and at least not inhibit it.

Immediate Objective 1.1	Protect lives through food aid.
Intervention level	Internally displaced persons and vulnerable groups.
Approach	Direct delivery of food and where possible, food-for-work activities to raise long-term agricultural productivity and improve urban infrastructure.
Location	National wherever the need occurs. Particular emphasis on the drought affected western and southern provinces and the Hazarajat.

A number of substantial food distribution programmes are already in train through the World Food Programme (WFP) and other agencies and NGOs. Where possible, these have been aimed to assist people to stay in their home areas rather than move. The difficulties of access through mountain areas in the winter have compounded the problems of this task.

Many people are hungry because they have no opportunity to earn the money with which to buy food. There is scope to break this vicious cycle of poverty and economic decline in a positive manner, by using a humanitarian response to underpin investment in raising longer-term productivity. Indicative project concepts associated with the objective of protecting lives are set out in Table 11.

Table 11. Protect lives through food aid

No	Project concepts by Immediate Objective Activity Level	Target Group	Time period	Linkages
1.1.1	**Deliver food assistance to poor and needy**			
.01	- Undertake needs assessments to identify 'at risk' groups	Vulnerable	Short-term	
.02	- Quantify needs and organise targeted assistance packages	Agencies/NGOs	Short-term	
.03	- Deliver food aid to identified 'at risk' target groups and areas of need	At risk groups	Short-term	1.2.1
1.1.2	**Food for work to strengthen long-term recovery and production**			
.01	- Undertake multi-agency/NGO joint needs assessments in rural and urban areas	Households	Short-term	
.02	- Identify agricultural development activities which can be packaged with food aid	Agencies/NGOs	Short-term	
.03	- Prepare and implement 'food for agricultural development work' packages	Rural h'holds	Short-medium	1.3.01,02
.04	- Prepare and implement 'food for urban development work' packages	Urban h'holds	Short-medium	1.3.01,02

In a number of rural areas there are major irrigation canal and drainage systems in need of rehabilitation. This work could be accomplished through an appropriate mix of hand labour and machinery. With little or no rain, the current low river flows offer an opportunity to undertake major repairs to river offtakes which would normally be full of water. In urban areas there is scope for road and building construction and other civil works which could restore urgently needed infrastructure, while at the same time providing people with food, either through food-for-work (FFW) or cash-for-work (CFW) schemes.

5.2.2 Raising Agricultural Output

More than 85% of agricultural output in Afghanistan comes from barely 5% of the land area. The second objective of the food strategy is to ensure national food security by making this limited resource as productive as possible, while recognising the constraints of rational economic and environmental management. Raising agricultural productivity will follow three major themes: raising crop production, raising livestock production and increasing horticulture and agro-forestry. Interventions in each of these sectors will vary according to the technical needs of the varying geographic locations involved. Raising the productivity and value of food and cash crops is a prime strategy in combating increased opium production.

Immediate Objective 1.2	Strengthen food security through raising agricultural output
Intervention level	Farmer and kuchi households, traders and agricultural suppliers
Approach	Intensifying irrigated agriculture with better crop varieties, increased use of fertiliser, appropriate pest control, improved animal health, husbandry and nutrition and better integration of crop, livestock and tree-based production systems.
Location	Relevant locations will vary according to the various activities which are detailed in the subsections below.

Increased Crop Production

In 1992, an estimated six million Afghans were refugees in neighbouring countries. Since that time, the international and NGO community have made a concerted effort to assist the

majority of these families to return to productive lives in their home country. Over the past eight years, a multitude of mostly small-scale and short-term interventions have enabled agricultural production to be re-established. The benefit of these activities can be seen from the fact that the country was estimated to be 70% self-sufficient in cereals from the 1997-98 harvest. Afghanistan has experienced rapid rates of population growth in recent years, which is adding to the pressure on an already stressed resource base.

These gains are not universal. To date most of the emphasis has been on households which are in accessible localities, such as the major irrigated valleys of eastern, southern and western Afghanistan. FAO has been operating a successful national programme of quality seed production for some years, with an annual output now exceeding 4000 tonnes of Quality Declared Seed (QDS). However, this is less than 10% of national seed needs if crop yields are to be lifted to a level that will ensure the target of national self-sufficiency is achieved. To date the programme has also lacked the resources to appropriately service the need of rainfed, remote and high altitude areas.

Specific Objective 1.2.1	Raise crop technology and husbandry levels.
Intervention level	Farmer households, traders and agricultural suppliers.
Approach	Intensifying irrigated agriculture with selection of improved varieties and production of quality seed for better crop varieties, increased use of fertiliser and appropriate pest control.
Location	Locations 1 and 2 provide the principal opportunities to increase the volume of agricultural output. Locations 4 and 5 have particular importance for locally-based food security. Location 3 has potential for periodic large grain surpluses.

The key activity in raising crop yields is establish farm-based extension networks to ensure provision of sufficient quantities of quality seed across a range of irrigated and rainfed crop types suitable for the various climatic conditions found in the country. This activity must be supported by locally-based seed processing, storage and management systems which would ensure the delivery of seed to those who need it. The existing national seed laboratory would be augmented on a regional basis for testing and quality control. Crop committees for the production of improved seed can form the basis for sustainable self-management of ongoing seed multiplication, processing and storage. They can also provide a focus for developing community participation in longer-term activities leading to greater community empowerment. Details are summarised in Table 12.

Table 12. Raising crop technology and production levels

No	Project concepts by Immediate Objective Activity Level	Target Group	Time period	Linkages
1.2.1	**Raise crop technology through extension and better husbandry**			
.01	Provide quality seed of appropriate varieties of winter and summer crops			
a	- high yield/high input irrigated varieties	Farm families	Short-medium	1.2.3.01
b	- high altitude/low input short season varieties	Farm families	Short-medium	
c	- rainfed varieties	Farm families	Short-medium	
.02	Develop self-sustaining seed multiplication system, processing, storage and management	Farmers	Short-medium	1.2.1.01
.03	Encourage local availability of inputs (fertiliser, agrochemicals and small-scale equipment)	Traders	Short-medium	
.04	Extend seed laboratory network for quality control	Agencies	Short-medium	
.05	Utilise agricultural improvement activities to strengthen community decision-making	Communities	Medium-long	

Increased Livestock Production

The national livestock herd is estimated at 3.7 million cattle, 22 million sheep, 9 million goats, 1.4 million donkeys and horses and 11 million poultry. Livestock are a significant source of food for many households and of draught and transport power for agriculture. Many rural households have one or more cows and a number of sheep and goats. The nomadic *kuchi* population of 1.5 million people exists almost solely on livestock products. Livestock are also

important in the household economy as a major form of savings and a source of cash income when needed.

Specific Objective 1.2.2	Improve animal health, husbandry and nutrition
Intervention level	Farmer and *kuchi* households, traders and agricultural suppliers
Approach	Improve animal productivity through better nutrition, disease control and housing.
Location	Improving livestock nutrition is relevant in all areas. The best opportunities for crop/livestock integration are in Locations 1 and 2, while rangeland management issues are important in Locations 3, 4 and 5.

The productivity of livestock in Afghanistan is low due to poor management and feeding and a limited genetic potential of the livestock breeds. Despite the efforts of farmers to produce fodder, most animals are poorly fed. The low quantity and nutritional quality of feed received by most animals is reflected in their poor productivity. As a result of limited knowledge on the part of farmers and the lack of resources for veterinary services, not enough is done to counter the widespread levels of chronic disease.

Programmes have commenced to expand the available range and use of fodder crops to improve the quality of livestock feed and widen crop rotations to improve soil fertility. Efforts have also been started for the genetic improvement of cattle breeds and poultry. However, much more needs to be done in these areas to establish sound technical knowledge of the available options. An even greater challenge is to transmit these ideas to farmers and to have them adopted as part of standard farming practice. Project concepts to deal with these issues are set out in Table 13.

Table 13. Improvement of animal health, husbandry, nutrition and animal breeding

No	Project concepts by Immediate Objective Activity Level	Target Group	Time period	Linkages
1.2.2	**Improve animal health, husbandry, nutrition and animal breeding**			
.01	Improve animal nutrition through selected fodder crops, fodder trees and supplements	Farmers/kuchis	Short-medium	
.02	Widen network of extension workers through BVW training and linkage to other projects	Farmers/kuchis	Medium-long	
.03	Assist in disease prevention and animal health control through service delivery and provision of medicines and vaccines	Farmers/kuchis	Short-medium	
.04	Develop high quality feed sources from agricultural processing byproducts (oilcake etc)	Farmers	Medium-long	
.05	Establish appropriate breed development schemes for ruminants and poultry	Farmers	Medium-long	
.06	Assist in the development of winter housing for livestock	Farmers/kuchis	Short-medium	
1.2.3	**Increase crop/livestock integration**			
.01	Identify high yielding varieties of crops with improved fodder residue characteristics	Farmers	Short-medium	1.2.1.1.a
.02	Develop animal/fish/plant systems to maximise byproduct/inter-product use	Farm families	Short-medium	1.2.5.02
1.2.4	**Improved grazing land utilisation/management**			
.01	Investigate effect on pastures of prolonged non-grazing periods resulting from mines	Agencies/Kuchis	Medium-long	
.02	Implement community consultations with *kuchi* groups on rangeland management	Agencies/Kuchis	Medium-long	
.03	Develop options for grazing management within the traditional pastoral system	Kuchis/Agencies	Medium-long	

Increased Horticulture and Agro-forestry Production

Afghanistan has an excellent climate for tree production. A wide variety of temperate fruits and nuts - almonds, apples, apricots, grapes, mulberries, peaches, pomegranates, plums and walnuts - grow prolifically. Fruit production is both a significant potential source of food and an opportunity for farmers to develop commercial, as distinct from subsistence activities. Historically, Afghanistan was a recognised fruit producer with a substantial export trade to regional and international markets. Timber for fuel and commercial uses are in short supply. There are a range of opportunities to develop integrated fruit and timber production systems.

Specific Objective 1.2.5	Increase horticultural and integrated agroforestry activity and production
Intervention level	Farmers and households, agricultural traders

Approach — Increase the planting of improved varieties of fruit and nut trees, raise farmers knowledge and skills in tree husbandry and pest management, expand markets for fruits and nuts, develop integrated tree cropping systems for fodder and fuelwood.

Location — The main results will be achieved in Locations 1 and 2, though activities will vary significantly with geographic region which affects the categories of fruit and tree crops which can be grown.

Many of the tree-based production systems suffered badly from neglect when farming areas were abandoned during the war period. In recent years a number of highly successful programmes have been implemented to extend orchard production, including establishing private commercial nurseries with selected varieties of improved types of fruit trees. There are substantial benefits to be gained from extending these activities. A key challenge will be to put in place and strengthen marketing systems to maximise the incomes realised from expanded horticultural production. Selected marketing interventions are proposed in Section 5.3.1. Project concepts to implement tree crop development are set out in Table 14.

Table 14. Increased horticulture and integrated agroforestry production

No	Project concepts by Immediate Objective Activity Level	Target Group	Time period	Linkages
1.2.5	**Increase horticultural and integrated agroforestry activity and production**			
.01	- Extend the development of horticultural nurseries/orchards for commercial fruit production	Farmers	Short-medium	
.02	- Raise standards of orchard management and husbandry practices	Farmers	Short-medium	
	- Train trainers in Integrated Pest Management, crop care and presentation of produce	Expert farmers	Short-medium	
.03	- Assist in the development of markets for commercial fruit production	Farmers/Traders	Short-medium	
.04	- Develop horticulture-based agroforestry system for fruit, nuts and timber	Farmers	Medium-long	
.05	- Develop animal-linked horticultural-based agroforestry systems	Farm families	Medium-long	1.2.3.02
.06	- Develop integrated herbaceous legume/wheat cropping system	Farmers	Medium-long	
.07	- Develop extensive fodder tree and fuel wood production for grazing land improvement	Farmers/*kuchis*	Medium-long	

The few examples in Afghanistan of integrated tree crop systems offer an indication of what could be gained by increasing village-level food and income generation. Mulberry trees grown around a fishpond can feed both the fish and silkworms, generating food and cash and subsequently providing usable timber. There is great scope for using fast-growing poplars for commercial timber. There are a number of fast-growing leguminous trees which provide fodder for livestock and can be used to stabilise erosion and revegetate rangelands.

5.2.3 Water Resource Management

Water is the scarcest resource in Afghan agriculture. In the narrow valleys of the mountain areas, land may be the limiting resource for individuals or communities. On a national scale however, it is the volume and reliability of water which limits what can be produced.

Much of irrigated agriculture in Afghanistan is opportunistic. Water supply is seasonal and uneven, both within and between years. Where possible, farmers will plant as much area as they think they will be able to water, but if supply runs short some is abandoned. Much water is wasted on fields which are not level and also through over-watering. The food supply from irrigated agriculture can be both increased and stabilised by improving the efficiency of use of the available water. Moreover, there is a need to develop appropriate soil conservation and flood control measures. The activities of the recently established Land & Water Development Group are an important step to carry out this task in a co-ordinated and integrated manner.

Immediate Objective 1.3 — Increase food production and stabilise food security through improved water resource management

Intervention level — Irrigation farmers, traditional irrigation managers (*mirabs* and *wakils*), communities

Approach	Improve the efficiency of irrigation through the refurbishment of canals and drains and improved in-field levelling, supported by system-wide water management planning; train traditional water managers and farmers to improve water-use efficiency and support with extension activity; develop regional water resource management approaches.
Location	All irrigated areas, but with particular relevance for the high productivity Locations 1 and 2.

The current drought has created an urgent water resource management problem in several regions. In many areas individuals are drilling deep bores and pumping water for irrigation. There are numerous reports of falling underground water levels, particularly where bores have been drilled in the vicinity of *kareze* villages. In many cases technical data on underground water reserves and their capacity for replenishment are not available. It is clear however, that current activities have the potential to do long-term damage to the entire system of agriculture based on underground water and the large population this supports in hundreds of small villages in many widely scattered locations. Project concepts for improved water resource management are set out in Table 15.

Table 15. Water resources management

No	Interventions and Activities	Target Group	Time period	Linkages
1.3.1.	**Increase/stabilise food production by improved irrigation efficiency**			
.01	- Commence effective system-wide planning of individual irrigation systems on regional basis	Communities	Short-ongoing	1.3.2.01
.02	- Identify and implement canal and drainage refurbishment activities	Irrig'n farmers	Short-medium	1.1.2.03
.03	- Design and implement replicable mechanised high-tech in-field levelling system	Irrig'n farmers	Short-medium	
.04	- Develop community concepts of water-use efficiency and train *mirabs*	Farmers/*Mirabs*	Short-medium	
.05	- Support *mirabs* with extension activity	*Mirabs/Wakils*	Short-medium	
1.3.2	**Develop regional water resource management policies and actions**			
.01	- Undertake rapid surveys of drought impacts on water resource utilisation	Agencies	Short-ongoing	1.3.1.01
.02	- Develop regional/district-based responses to identified water resource management problems	Agency/Cmnt'y	Short-medium	1.3.1.02
.03	- Assist regional/local authorities/communities to implement resource protection actions	Communities	Short-medium	

A rapid survey should be undertaken to assess the impact that random drilling and pumping activities are having on underground water resources. Once the scale of the problem is known, then actions can be planned to better manage the use of underground water to protect the resource for communities, rather than for individual benefit. For an efficient implementation of all aspects of water resource management the co-ordination through the Land & Water Development Group will play an important role.

5.3 OBJECTIVE 2. ECONOMIC DEVELOPMENT

5.3.1 Improve Agricultural Markets

There must be functioning markets to link food producers with consumers. Wheat, meat fruit and vegetables are food for the population and a source of cash incomes for the producers. The agricultural marketing infrastructure in Afghanistan suffered badly as a result of the war. The damage to roads, communications systems and processing facilities have all had a major impact on farmers' ability to sell their product. The lack of civil order, with random road tolls and theft in the period 1992 to 1997, was particularly damaging for those who were trying to move agricultural products to market.

However, the climate and soils to grow quality grains, fruit, nuts and vegetables are still there. There has been considerable improvement in civil order, and repairs are being implemented on the arterial roads. Given the capacity to prepare and deliver their produce,

there is every reason to believe that Afghan farmers can again be significant suppliers to national, regional and world markets.

Specific Objective 2.1.1	Facilitate the development of local and export markets for agricultural products
Intervention level	Farmers and households, agricultural traders
Approach	Improve the skills of farmers and traders in product grading and presentation, facilitate linkages between farmers and traders, assist in the development of local storage and small-scale processing and improve access to information along the marketing chain.
Location	Locations 1 and 2 are the principal areas which will produce surpluses either for domestic or export markets. In good years Location 3 is capable of producing significant saleable grain surpluses.

With poor communications, many farmers are unaware of the opportunities for price improvement with better presentation and grading. Local preservation techniques such as sulphur dusting of dried apricots can reduce wastage and add considerable value to their products. Better information would help overcome gluts of vegetables such as onions which have occurred in recent years. A number of small-scale programs implementing these ideas are already underway, but much more needs to be done, and on a wider scale. Project concepts to facilitate improvements in agricultural markets are set out in Table 16.

Table 16. Improvements in agricultural markets

No	Interventions and Activities	Target Group	Time period	Linkages
2.1	**Immediate Objective 2.1 Improve the functioning of agricultural markets**			
2.1.1	**Facilitate the development of local and export markets for agricultural products**			
.01	Develop farmers knowledge of grading and presentation of fruits and nuts for market	Farmers/Traders	Short-medium	2.2.1.05
.02	Increase market opportunities for farmers by facilitating linkages with competent traders	Farmers/Traders	Short-medium	2.2.2.04
.03	Assist local development of storage and small-scale processing of agricultural products	Farmers/Traders	Short-medium	2.3.2.03
2.1.2	**Increase farmers access to relevant market information**			
.01	Develop systems to gather and disseminate accurate quantity and price data	Farmers/Traders	Short-medium	
.02	Develop systems for distributing key market data at district and subdistrict level	Farmers/Traders	Short-medium	2.1.1.01

The principal export arteries are the Herat-Qandahar-Quetta highway in the west and the Kabul-Jalalabad-Torkhum road in the east. Repair work was in process on both these roads in late 2000 and 2001 which should significantly improve the prospects for rebuilding export markets.

5.3.2 Increased Economic Activity and Investment

Earning an income through wage employment is a clear priority in enabling Afghans to provide for themselves. While this is particularly important in urban areas, it is also a major survival strategy for many rural households. In Afghanistan's war-torn and ravaged economy, there is considerable scope to raise productivity and employability in the home and on the farm. Basic skills and knowledge of home gardening, small-scale food production and food preservation will enable women and girls to contribute positively to household food supply and hence wellbeing. Improved technical knowledge on production, crop care and pest control will enable farmers to raise the productivity of their resources of labour, land and water.

A large number of people have lost formal employment or are unable to find casual work as the economy has flattened out. There is little commercial investment in construction in the urban or rural areas. There is a clear link between economic opportunity and food security. In the absence of the state, there is a role for the assistance community to develop programmes to employ large numbers of people in productive work programmes such as civil

works projects and in small scale manufacturing either at home or in small to medium scale production centres. With sufficient capital investment, training and market linkages these could develop into viable and sustainable livelihood opportunities in the manufacturing and processing sector. Where the private sector is currently unwilling to take the risk, the assistance community needs to take a lead in order to mitigate inevitable crisis as people's coping capacities are stretched to survival limits.

Specific Objective 2.2	Raise productivity and employment capacity of household and workforce
Intervention level	Individuals and households in rural and urban areas
Approach	Train trainers and then implement home and farm-based training for individual men and women in a range of activities directly related to food production and sale.
Location	All areas, but with specific importance for urban areas.

There are sufficient positive experiences to show that training for women is feasible and will reap benefits for the household economy. Strongly positive results have also been gained from training for young people in directly marketable skills such as bakery, carpentry, carpet weaving, engine repair, bricklaying, motor mechanics and radio repairs. Several NGO-implemented programmes exist which started in refugee camps and are now also conducted in-country. Many trainees have become self-employed or are now in wage employment, all of which contributes to increasing economic activity with positive flow-on effects.

The most sustainable form of assistance is where people are empowered to help themselves. Such assistance provides a sense of ownership in the result and positive results become self-reinforcing. The poor or non-existent state of governance in Afghanistan presents a particular problem for the international community in providing assistance. The more that can be done to facilitate the creation of community-based mutual interest activities, the closer the country moves to creating participatory decision-making institutions which have prospects for sustainability.

CBOs have a real role to play in local institution-building and social capital formation. Sustainable participation can be brought about by involving the members of CBOs in needs identification and development planning. Long-term jobs can be created by using CBOs as a vehicle for credit provision and training, supervision and management. Strengthening the capacity of local communities to identify local priorities and to plan and implement them must strengthen the creation of a civil society and better governance. Project concepts for increasing productive skills and strengthening job creation through community-based organisations are outlined in Table 17.

Table 17. Increase productive skills and employment

No	Interventions and Activities	Target Group	Time period	Linkages
2.2.1	**Raise productivity and employment capacity of the household and workforce**			
.01	- Train women trainers to provide basic within-household instruction in production activities			
.02	vegetables, animal care, poultry, honey and food preservation + storage and handicrafts	Women trainers	Short-term	
.03	- Provide home-based training to women's groups on food production and preservation	Women/girls	Short-medium	
.04	- Provide home-based training to women's groups in production and sale of handicrafts	Women/girls	Short-medium	
.05	- Improve farmers' knowledge, skills and productivity through Farmers Field Schools	Farmers	Short-medium	
2.2.2	**Raise the opportunities for employment through skills development**			
.01	- Develop regionally-based training capacity for trades skills	Agency/NGO	Short-medium	
.02	- Develop and offer regionally-based training courses in trades skills	Agency NGO	Short-medium	
.03	- Men and women undertake training in trades and other employment skills	Men + women	Short-medium	
.04	- Provide micro-credit for trained persons to start their own businesses	Men + women	Short-medium	2.2.1.02
2.2.3	**Facilitate development of community-based mutual assistance organisations**			
.01	- Provide appropriate incentives and catalytic support to establish CBOs	Communities	Short-medium	
.02	- Fund the appointment of qualified Community Liaison Officers for work with CBOs	Communities	Short-medium	
.03	- Facilitate CBOs to plan and implement local employment activities	Communities	Short-medium	

The drought has potentially serious adverse longer-term implications for Afghanistan's agriculture. In the absence of major remedial and rehabilitation measures, agricultural recovery will be delayed and diminished, even after the rains return. This will worsen the vicious circle whereby the weak agricultural base increases the country's vulnerability to drought, and drought in turn further weakens the agricultural base. In the worst-case scenario, this could lead to long-term reductions in agricultural production and permanent dependence on food imports and food aid.

These problems are aggravated by the absence of a well-functioning, development-oriented government in Afghanistan. Some of the instruments normally used to promote food security, such as government-run safety nets, pricing policies, large irrigation and other infrastructure investments, together with agricultural research and extension, are not available.

These issues highlight the need for a more comprehensive medium-term approach to food security strategy by the development assistance community. This must encompass both short- and longer-term aspects. It must cover both rural and urban food security needs, take into account regional differences, and make coordinated use of the assistance instruments available.

1.3 STRATEGIC PRINCIPLES

Food security – broadly defined as access by all people at all times to enough food for an active, healthy life – is at the heart of both humanitarian needs and economic development. It is a quintessential cross-cutting theme, including agricultural and non-agricultural activities; urban and rural areas; macro, regional, and local interventions; government, private sector, community, and household actions; and short- and longer-term dimensions.

The following broad strategic principles have been adopted to guide the formulation and implementation of the food security strategy:

- **A coordinated and integrated approach,** which brings together the different assistance partners, their activities, and funding in the interest of meeting Afghanistan's food security needs.

- **Balance and consistency between short-term and longer-term interventions, and between humanitarian relief and other aid actions.**

- **Focus on the most vulnerable groups** through short-run humanitarian interventions, to especially include women and children. Also to ensure adequate attention to the poorest and most vulnerable agro-ecological zones in agricultural interventions.

- **Increased priority and funding for interventions which strengthen Afghanistan's agricultural production base and facilitate prompt recovery from the drought.**

- **Efforts to ensure that food security interventions, particularly in agriculture, do not inadvertently result in increased opium poppy cultivation.**

- **Differentiated food security strategies and interventions at the regional level,** taking fully into account the distinctive characteristics, differing potentials, and concrete food security needs of Afghanistan's main regions.

- **The recognition of the specific conditions for urban food security**, which require further work to develop an integrated approach for urban recovery.

5.3.3 Increased Economic Independence

A central function of a national government is to create an environment where investment can succeed and generate employment, providing economic independence to individuals and households. After 20 years of war and without a recognised central government, the ruined state of much of the civil infrastructure has reduced economic activity in some areas to the most basic forms.

Prior to 1978, a large proportion of the population in the urban areas was employed in the formal state sector. The collapse of the state has created a spiral of economic decline. People have lost their jobs, which has directly affected their family purchasing power. This in turn has affected the market for rural produce and with it, food security, in both rural and urban areas. It has also meant the loss to the economy of key elements of social welfare such as health, education and infrastructure operation and maintenance.

Something of the order of 30% of the population are dependent on wage employment for their economic independence and survival. Raising the level of employable skills and creating jobs through investment are crucial to the food security of this sector of the Afghan population. With a sense of stability now apparent in much of the country, there are positive examples where opportunities for local investment to stimulate economic activity have produced significant advances in economic activity and employment. To further encourage and promote this process it is strongly recommended to develop an integrated approach for urban recovery.

Specific Objective 2.3	Increase economic independence
Intervention level	Individuals and households in rural and city areas, local, and regional authorities
Approach	Assistance with group-based micro-finance to individuals to start or increase economic activity and employment and co-operation with local or regional authorities to improve economic activity by refurbishing infrastructure.
Location	National with particular relevance for urban and non-farming rural areas.

The potential for micro-finance to generate individual economic activity and self-employment or employment for others is well understood. While many of the success stories are from other countries, there has been sufficient positive experience in Afghanistan to be confident that when properly managed, micro-finance for individuals will work. However, if assistance interventions are to alleviate poverty and not just increase the growing disparity between those with access to resources and those without, local institutions will need to be developed, such as through community development programmes which include local redistribution of wealth mechanisms. This in turn needs to develop in step with local customary law such that communities are able to hold people accountable to commitments made to return loans. This is essential in such an unstable environment and especially in urban areas where social cohesion is naturally weaker as people are not necessarily permanently settled and are more autonomous and independent.

Project concepts for generating economic independence for individuals are set out in Table 18.

Table 18. Increase economic independence

No	Interventions and Activities	Target Group	Time period	Linkages
2.2	**Develop an integrated approach for urban recovery.**			
.01	- Identify opportunities for increased economic activities in the urban areas.	Agency/Auth'ty	Medium-long	
.02	- Develop and implement an action plan to increase urban economic activities.	Agency/Auth'ty	Medium-long	
2.2.1	**Improve ability to finance small to medium-scale investment**	Indiv/Commt'ies	Medium	
.01	- Develop and implement small-scale credit schemes in rural and urban areas			

.02	- Facilitate finance for CBOs to undertake job creating investment	Indiv/Commt'ies	Medium	
.03	- Assist development of joint-ownership machinery pools for farm or production equipment			
.04	- Seek out joint-venture partners to assist in re-establishing processing capacity	Communities	Medium	
2.2.2	**Raise the opportunities for employment through economic development**			
.01	- Identify selective infrastructure investments with high employment spin-off	Agencies	Medium-long	
.02	- Negotiate collaborative investment agreements where possible	Agency/Auth'ty	Medium-long	
.03	- Undertake selective infrastructure investments in regional areas	Agency/Auth'ty	Medium-long	
2.2.3	**Develop group-based micro-finance schemes for investment and job creation**			
.01	- Develop group-based micro-finance schemes with reference to job creation prospects	Agency/comn'ty	Short-medium	
.02	- Implement group-based micro-finance schemes under close supervision	Men + women	Short-medium	2.4.1.03

5.4 STRATEGIC ACTIVITIES SUMMARY

The strategic activities for food security are summarised in Table 19.

Table 19. Strategic activities to improve food security in Afghanistan by region

No	Interventions and Activities	Target Group	Time period	Linkages
1.0	**OBJECTIVE 1. AGRICULTURAL DEVELOPMENT FOR FOOD SECURITY**			
1.1	**Immediate Objective 1.1 Protect lives through food aid**			
1.1.1	**Deliver food assistance to poor and needy**			
.01	- Undertake needs assessments to identify 'at risk' groups	Vulnerable	Short-term	
.02	- Quantify needs and organise targeted assistance packages		Short-term	
.03	- Deliver food aid to identified 'at risk' target groups and areas of need	At risk groups	Short-term	1.2.1
1.1.2	**Food for work to strengthen long-term agricultural production**			
.01	- Undertake multi-agency/NGO collaborative needs assessments in rural areas	Rural households	Short-term	
.02	- Identify agricultural development activities which can be packaged with food aid		Short-term	
.03	- Prepare and implement 'food for agricultural development work' packages	Rural households	Short-medium	1.3-01, 02
1.2	**Immediate Objective 1.2 Strengthen food security through raising agricultural output**			
1.2.1	Raise crop technology through extension and better husbandry			
.01	Provide quality seed of appropriate varieties of winter and summer crops			
.01.a	- high yield/high input irrigated varieties	Farm families	Short-medium	1.2.3.01
.01.b	- high altitude/low input short season varieties	Farm families	Short-medium	
.01.c	- rainfed varieties	Farm families	Short-medium	
.02	Develop self-sustaining system for seed multiplication, processing, storage and management	Farmers	Short-medium	1.2.1.01
.03	Encourage local availability of inputs (fertiliser, agrochemicals and small-scale equipment)	Traders	Short-medium	
.04	Extend seed laboratory network for quality control	Agencies	Short-medium	
1.2.2	**Improve animal health, husbandry and nutrition**			
.01	- Improve animal nutrition through selected fodder crops, fodder trees and supplements	Farmers/kuchis	Short-medium	
.02	- Widen network of extension workers through BVW training and linkage to other projects	Farmers/kuchis	Medium-long	
.03	- Assist in animal health control through provision/transport of medicines and vaccines	Farmers/kuchis	Short-medium	
.04	- Develop high quality feed sources from agricultural processing byproducts (oilcake etc)	Farmers	Medium-long	
.05	- Assist in the development of winter housing for livestock	Farmers/kuchis	Short-medium	
1.2.3	**Increase crop/livestock integration**			
.01	- Identify high yielding varieties of crops with improved fodder residue characteristics	Farmers	Short-medium	1.2.1.01.a
.02	- Develop animal/fish/plant systems to maximise byproduct/inter-product use	Farm families	Short-medium	1.2.5.02
1.2.4	**Improved grazing land utilisation/management**			
.01	- Investigate effect on pastures of prolonged non-grazing periods resulting from mines	Kuchis	Medium-long	
.02	- Implement community consultations with kuchi groups on rangeland management	Agencies/Kuchis	Medium-long	
.03	- Develop options for grazing management within the traditional pastoral system	Kuchis/Agencies	Medium-long	
1.2.5	**Increase horticultural and integrated agroforestry activity and production**			
.01	- Extend the development of horticultural nurseries and orchards for commercial fruit production	Farmers	Short-medium	
.02	- Use Farmers Field Schools to raise standards of orchard management and husbandry practices	Farmers	Short-medium	
.03	- Train trainers in Integrated Pest Management (IPM), crop care and presentation of produce	Expert farmers	Short-medium	
.04	- Assist in the development of markets for commercial fruit production	Farmers/Traders	Short-medium	
.05	- Develop horticulture-based agroforestry system for fruit, nuts and timber	Farmers	Medium-long	
.06	- Develop animal-linked horticultural-based agroforestry systems (mulberry-silk-fish and orchard-fish-duck)	Farm families	Medium-long	1.2 3.02
.07	- Develop integrated herbaceous legume/wheat cropping system	Farmers	Medium-long	
.08	- Develop extensive fodder tree and fuel wood tree production for grazing land improvement	Farmers/kuchis	Medium-long	

Table 19. Strategic activities to improve food security in Afghanistan by region (continued)

No	Interventions and Activities	Target Group	Time period	Linkages
1.3	**Immediate Objective 1.3 Stabilise food security by water resource management**			
1.3.1.	**Increase/stabilise food production by improved irrigation efficiency**			
.01	- Commence effective system-wide planning of individual irrigation systems on regional basis	Communities	Short-ongoing	1.3.2.01
.02	- Identify and implement canal and drainage refurbishment activities	Irrigation Farmers	Short-medium	1.1.2.03
.03	- Design and implement replicable mechanised high-tech in-field levelling system	Irrigation Farmers	Short-medium	
.04	- Develop community concepts of water-use efficiency and train mirabs	Farmers/Mirabs	Short-medium	
.05	- Support mirabs with extension activity	Mirabs/Wakils	Short-medium	
1.3.2	**Develop regional water resource management policies and actions**			
.01	- Undertake rapid surveys of drought impacts on water resource utilisation	Agencies	Short-ongoing	1.3.1.01
.02	- Develop regional/district-based responses to identified water resource management problems	Agency/Authority	Short-medium	1.3.1.02
.03	- Assist regional/local authorities/communities to implement resource protection actions	Auth'ty/community	Short-medium	
2.0	**OBJECTIVE 2. ECONOMIC DEVELOPMENT FOR FOOD SECURITY**			
2,1	**Immediate Objective 2.1 Improve the functioning of agricultural markets**			
2.1.1	**Facilitate the development of local and export markets for agricultural products**			
.01	Develop farmers knowledge of grading and presentation of fruits and nuts for market	Farmers/Traders	Short-medium	2.2.1.05
.02	Increase market opportunities for farmers by facilitating linkages with competent traders	Farmers/Traders	Short-medium	2.2.2.04
.03	Assist local development of storage and small-scale processing of agricultural products	Farmers/Traders	Short-medium	2.3.2.03
2.1.2	**Increase farmers access to relevant market information**			
.01	Develop systems to gather and disseminate accurate quantity and price data	Farmers/Traders	Short-medium	
.02	Develop systems for distributing key market data at district and subdistrict level	Farmers/Traders	Short-medium	2.1.1.01
2.2	**Immediate Objective 2.1 Increase productive skills**			
2.2.1	**Raise productivity and employment capacity of the farm household/workforce**			
.01	- Train women trainers to provide basic within-household instruction in production activities			
.02	vegetables, animal care, poultry, honey and food preservation + storage and handicrafts	Women trainers	Short term	
.03	- Provide home-based training to women's groups on food production and preservation	Women/girls	Short-medium	
.04	- Provide home-based training to women's groups in production and sale of handicrafts	Women/girls	Short-medium	
.05	- Improve farmers' knowledge, skills and productivity through Farmers Field Schools	Farmers	Short-medium	1.2
2.2.2	**Raise the opportunities for employment through skills development**			
.01	- Develop regionally-based training capacity for trades skills	Agency/NGO	Short-medium	
.02	- Develop and offer regionally-based training courses in trades skills	Agency/NGO	Short-medium	
.03	- Men and women undertake training in trades and other employment skills	Men + women	Short-medium	
.04	- Provide micro-finance for trained persons to start their own businesses	Men + women	Short-medium	2.2.1.02
2.3	**Immediate Objective 2.2 Increase financial independence**			
2.3.1	**Develop group-based micro-finance schemes for investment and job creation**			
.01	- Develop group-based micro-finance schemes with reference to job creation prospects	Agency/community	Short-medium	
.02	- Implement group-based micro-finance schemes under close supervision	Men + women	Short-medium	2.2.2.03
2.3.2	**Raise the opportunities for employment through economic development**			
.01	- Identify selective infrastructure investments with high employment spinoff	Agencies	Medium-long	
.02	- Negotiate collaborative investment agreements where possible	Agency/Authority	Medium-long	
.03	- Undertake selective infrastructure investments in regional areas	Agency/Authority	Medium-long	

- **Flexibility in adjusting instruments and funding as needs evolve.** Assistance agencies and donors should be ready to adjust priorities and increase funding for rehabilitation work to: (i) ensure that the drought does not have a long-term adverse impact on agricultural production and; (ii) that Afghanistan is in a better position to deal with water shortages in the future.

- **Commitment to a multi-year strategy with specified targets,** in terms of program planning, implementation, and, at least in principle, funding.

1.4 SUMMARY OF STRATEGIC DIRECTIONS

Mobilise and deliver sufficient food aid and non-food aid to meet the emergency needs of the most vulnerable elements of the population during the current drought crisis. Food aid constitutes only a small proportion of Afghanistan's current food gap and is not intended to try to close it. Instead, food aid is being targeted to meet the minimum food needs of the most vulnerable groups including households without able-bodied males, internally displaced persons (IDPs), orphans, etc. that otherwise would not have access to enough food to survive. Relief aid is being augmented by food-for-work and other income generation programs for poor households. In view of the gravity of the current situation, it is critical that relief activities, including food and associated non-food aid, are adequately funded.

Strengthen food security by raising agricultural productivity. More than 85% of agricultural output in Afghanistan comes from barely 5% of the land area, therefore there is a need to use this scarce resource efficiently. This may be achieved by intensifying irrigated agriculture with better crop varieties; increased use of fertiliser; appropriate pest control; improved animal health, husbandry and nutrition; and better integration of crop, livestock and tree-based production systems. In the short run the delivery of quality-certified seed should be greatly expanded in order to ensure sufficient quantities for sowing. Moreover, increased quality seed production should be made sustainable over the longer term through a larger multi-year program to develop self-sustaining systems for seed multiplication. With respect to livestock, particular focus needs to be given to areas where livestock comprise the most important element in household food security (eg, Hazarajat, Badakhsan).

Develop regional water resource management policies and improve irrigation efficiency. Conduct a rapid survey to assess the drought impact and support local communities to implement water resource protection actions. Use food-for-work and other interventions for repair and rehabilitation of larger irrigation systems that cannot be handled by communities. Cleaning and repair of smaller, local and community-oriented irrigation schemes should be encouraged through appropriate interventions that build on and strengthen community participation and promote sustainability. Over the medium term, support augmentation of water availability through completion and extension of existing irrigation schemes, and improved water resource management.

Expand non-agricultural income generation capacities over the medium term. Through micro-finance, community development, small-scale infrastrucure, appropriate training, and other effective, targeted interventions.

Facilitate the development of local and export markets for agricultural products. Facilitate linkages between farmers and traders. Support skills development in product grading and presentation. Assist in the development of local storage and small-scale processing.

Develop longer-term strategies and interventions. To help preserve groundwater resources, encourage reforestation, sustain increased horticultural production, and promote effective functioning of agricultural input and output markets.

2 FOOD PRODUCTION

2.1 RESOURCES FOR AGRICULTURE

Topography is the factor with the greatest influence on Afghanistan. It governs the local climate and water resources; where people live and what they can produce for their survival and sustenance; and how they interact with one another and with the wider world.

The Hindu Kush range bisects Afghanistan from east to west. In the east are the steep high peaks of the Wakhan Corridor at an altitude of 5500 to 7500 metres above sea level (masl). In east-central and central Afghanistan the mountains broaden into wide spurs fanning to the north and south at between 3000 and 4000 masl. To the west they end in the Safed Koh Range north of Herat and close to the north-western border at some 1100 masl.

It is the accumulated winter snow from the high mountains that sustains Afghan agriculture and it is the changing conditions down the length of the snow-fed river valleys which creates the varying production possibilities. In their upper reaches the valleys are steep, the rivers fast-flowing and the valley floors narrow. The winters are cold, but the summers are mild with short but abundant growing seasons. Lower down, as they move out past the foothills, the valley floors broaden into flat plains with slow-flowing rivers. Here the winters are milder and the summers hotter and the growing seasons longer.

Many of the crops grown in the lowlands are the same as those in the mountains, though the production systems are different due to different ambient temperatures. The gradations in altitude also influence the accessibility of water for irrigation, which further determines the differences in local agricultural systems. The fast-flowing streams of the upper reaches are hard to divert into simple canals and the irrigable land areas are small. In the lower reaches the rivers are slower-flowing and the irrigable land areas larger.

A system of eleven agro-ecological or production zones for Afghan agriculture are set out in Table 1, together with 1972 national data on land use by zone. This excludes Herat, for which data was not available at that time. The system is designed to facilitate the correlation with provincial-level agricultural statistics.

Table 1. Landcover statistics by Agro-ecological Zone[1]

No	Agro-ecological Zone	Orchards '000 ha	Irrigated '000 ha	Rainfed '000 ha	All Agric '000 ha	Unclassif '000 ha	Total sq km
	Hindu Kush						
1	Wakhan	0	4.8	0	4.8	1105.4	11102
2	Badakhshan	5.9	72.2	714.4	792.6	3331.4	41241
3	Central Mountains	10.3	479.3	848.5	1338.2	10113.8	114520
4	Eastern Mountains	12.7	452.1	151.1	615.9	4466.0	50819
5	Southern Mountains and Foothills	4.2	522.5	229.7	756.4	5682.8	64393
6	Northern Mountains and Foothills	7.6	301.4	2258.8	2567.8	6461.9	90297
	Surrounding areas						
7	Turkestan Plains	16.2	647.8	627.2	1291.2	3599.0	48902
8	Herat-Farah Lowlands	0.7	210.4	0.1	211.2	4675.3	48865
9	Helmand Valley-Sistan Basin	22.1	388.2	0.3	410.6	4430.5	48411
10	Western Stony Deserts	0.1	76.9	0	77.0	3610.2	36872
11	Southwestern Sandy Deserts	0	52.5	5.6	58.2	4392.5	44507
	Total (excluding Herat)	80.2	3208.0	4835.7	8124.0	51869.0	599929
	Herat adjustment						42471
	Total (including Herat)						642400

Source: Afghanistan Agricultural Strategy, FAO, Rome 1997, Land Management Report, Table 3, p.28.

[1] The 1972 land use data does not include any information on Herat province.

The first six zones relate to the Hindu Kush mountain system. The remaining five zones represent the deserts and plains which surround the mountains to the north, west, south and south-east. (see Map 1).

There is a strong general correlation between altitude, precipitation and length of growing season. The higher the altitude, the greater the amount of precipitation and the shorter the growing season due to frost hazard. Zones 1-4 are mountainous, where rainfall is sufficient for agricultural production and frost is the limiting factor. Zones 5 and 6 are flat with sufficient length of growing season for double cropping under irrigated conditions. The limiting factors are effective rainfall (rainfed agriculture) and irrigation water availability (irrigated agriculture).

Unreliable availability water is a major problem for agriculture in many areas. Water flow in even the largest rivers is often uneven. Seasonal floods in spring can damage river offtakes reducing available irrigation water at crucial times in crop growth. Low river flows in summer can restrict summer cropping in potentially highly productive areas. The impact of uneven water availability on farm productivity is hard to quantify. Through centuries of experience, Afghan farmers are skilled at extending the margins of production by opportunistic farming. While this may increase total output, it has the effect of lowering average yields compared to those which can be achieved by farmers with an adequate irrigation water supply.

Ownership and access to land and water resources is a complex issue, deeply woven into the fabric of Afghan society. While local khans or wealthy farmers may be disproportionately large landowners, their wealth and leadership status carries a range of social and economic obligations. This particularly applies to assisting with access to farm land or irrigation water and the provision of credit for poorer members of their clan or extended family group. In many areas the prevalence of sharecropping may be a function of the private ownership of water sources, particularly kareze, rather than the ownership of land.

Through a complex system of sharecropping and leasing, many more families have access to land, than own land. While the farmer working his own land is the most common form of production, many families gain access to land as sharecroppers. The sharecropper will use land or water belonging to another in return for paying a proportion of the production to the owner. The proportion paid will vary according to the respective contributions of the land owner and the sharecropper of land, water, seed and fertiliser, farm power and farm labour. In general, each of these elements is valued at one-fifth of the output, though the arrangements can vary widely according to the agreements between the landowner and the sharecropper.

Other land access arrangements can be: (i) Renting; on either an annual or long-term basis with the payment being a fixed amount of produce or money; (ii) Moneylender's lease, where the land is handed over for the use of a lender in return for a loan to the owner, though the ownership is not transferred; and (iii) Mortgage, where possession is taken of the title to land as security for a loan to the owner. Leasing is often associated with fruit production. The owner of an orchard or vineyard will lease the trees to a fruit merchant or trader who assumes responsibility for the final stages of production and particularly for harvesting and marketing the crop. The rent paid is often a fixed sum, rather than a percentage of the yield.

2.2 FARMING SYSTEMS

Afghan agricultural production is characterised by small holdings with irrigated cropping supplemented by livestock. Cropping intensity is a function of availability of irrigation water, particularly for summer crops and the length of growing season. Crop rotations are well understood and to the extent possible, legumes, animal manures and artificial fertilisers are used. The livestock system has two parts. Large stock, cattle and donkeys provide draught or cartage power and usually receive supplementary fodder from the irrigated area. The

smallstock (sheep and goats), survive largely by foraging on the sparse rangeland grazing. The system is highly integrated, with crop byproducts such as husks and stover being used for the animals and animal products, milk, meat, wool, hair, hides and dung being used by the household.

Seven farming systems are recognised as representing a combination of the agro-ecological zones and the range of limiting factors on production found across the country. The individual farming systems are summarised in Table 2.[2]

Table 2 Summary of Farming Systems

System No	Typical location: District	Typical location: Province	Short description
1	Shulgara	Balkh	Mixed irrigated and rainfed cropping, relatively large livestock component
2	Nejrab	Kapisa	Intermediate altitude intensive cropping system
3	Mehterlam	Laghman	Intermediate-low altitude high productivity, double cropping system
4	Maydan Shah	Wardak	High altitude cold area intensive food cropping system
5	Qara Bagh	Ghazni	Low intensity subsistence cropping and livestock system
6	Nad-i Ali	Helmand	Large-area mechanised food grains and industrial crop production
7	Arghandab	Qandahar	Intensive commercial horticulture and cereal cropping

Source: SCA Farming Systems in Afghanistan, Peshawar 1993

Collectively the farming systems described are considered to be representative of over 95% of irrigated agriculture and 85% of rainfed land. The principal omission is the high mountain areas of the central plateau and the north-eastern mountains, where agriculture is in scattered small pockets in an arid landscape.

Also omitted are the nomadic livestock owners *(kuchis)* who represent some 7% to 10% of the population and are the principal users of the semi arid lands. It is estimated that in 1999 the *kuchi* herds represented 30% of the national sheep herd, 39% of the goats, 5% of cattle, 54% of horses, 14% of donkeys and 63% of camels.[3]

Table 3 sets out the percentage of national irrigated and rainfed areas in the various regions and the systems which are typically found in these regions. The presentation is very broad-brush. The table should not be regarded as definitive as there are many overlaps and localised exceptions in the boundaries between the various farming systems.

Table 3 Farming system models by agro-ecological zone

Agro-ecological Zone	Systems applicable	Percent national area: irrigated	Percent national area: rainfed
Wakhan Corridor and Pamir Knot		0.1	0.0
Badakhshan		2.4	14.8
Central Mountains	No. 5	14.9	17.5
Eastern Mountains	No. 2, 3, 4	14.1	3.1
Southern Mountains and Foothills	No. 5	16.0	4.7
Northern Mountains and Foothills	No. 1	9.4	46.7
Turkestan Plains	No. 1	20.2	13.0
Herat-Farah Lowlands	No. 5, 6	6.4	0.0
Helmand Valley-Sistan Basin	No. 6, 7	12.5	0.0
Western Stony Deserts		2.3	0.0
South-west Sandy Deserts		1.6	0.1
Total Gross Area		100.0	100.0

Source: Afghanistan Agricultural Strategy, Farming Systems Report, Table 8, p.8.

2 Azam Gul, *et al.* 1993. *Farming Systems in Afghanistan.* (Vols I-VIII) Swedish Committee for Afghanistan, Peshawar 1993.

3 Ulfat-un-Nabi Khan and Muzaffar Iqbal, 1999. *The Role and Size of the Livestock Sector in Afghanistan.* UNDP, World Bank Afghanistan Sector Studies, Islamabad, 1999. Section 5.2, p.27.

Farming systems 2, 3 and 4 are highly productive. While they represent only 15% of irrigated area and almost no rainfed production, the high productivity of these systems means that the areas are densely settled and involve significant numbers of people. Their predominant area is the river valleys of the Eastern Mountains. The region includes two major cities (Kabul and Jalalabad) and accounts for over 30% of national population.

Systems 6 and 7 also represent less than 15% of irrigated area. They are found in the hot arid areas of the Helmand Valley-Sistan Basin in the south and therefore have almost no rainfed production. While they are not large as a proportion of national irrigated area, they are important, both locally and nationally. These are high producing farming systems which are capable of generating significant surpluses for the cities and for export and raw materials for processing industries.

Systems 1 and 5 are the most geographically widespread. System 1 is largely found north of the Hindu Kush and represents around 30% of irrigated land and 60% of rainfed agriculture. While the rainfed cereal production is highly erratic, it is capable of generating very large surpluses in good years. System No 5 is a marginal subsistence system. It is the most commonly occurring farming system representing nearly 35% of irrigated area and 25% of rainfed production. It is particularly associated with irrigation from kareze and wells.

Table 4 compares the various systems by selected climatic and technical factors; agro-ecological zone, location, altitude, precipitation, climate, and principal irrigation water source; together with agricultural factors such as length of growing period, limiting factors to production and the resultant cropping pattern.

Table 4 Principal climatic and agricultural factors of the key farming systems

Region	Typical district System no	Province	Climatic/technical factors					Agricultural factors		
			Altitude masl	Precp'n mm	Climate: Winter	Climate: Summer	Water source	Growing period	Limiting factors	Cropping pattern
Eastern Mountains	Maydan Shah (No 4)	Wardak	2000 to 3000	266	Cold	Mild	River	Short	Cold/ Land	Single
	Nejrab (No 2)	Kapisa	1000 to 2000	280	Cold	Mild	River	Short	Cold/ Land	Single
	Mehterlam (No 3)	Laghman	500-1500	184	Mild	Sub-trop	River	Long	Land	Double
Southern Mt'ns and Foothills	Qara Bagh (No 5)	Ghazni	1000 to 1500		Cold	Hot	Kareze	Short to Medium	Water	Single +
Northern Foothills/Plains	Shulgara (No 1)	Balkh	500-1000	200	Cold	Mild	River + Rainfed	Medium	Water	Single +
Helmand Valley -Sistan Basin	Arghandab (No 7)	Qandahar	500+	<150	Mild	Hot	River	Medium to Long	Water	Double
	Nad-i Ali (No 6)	Qandahar	500+	<150	Mild	Hot	River	Long	Water	Double

Source: Swedish Committee for Afghanistan. 1993. *Farming Systems in Afghanistan* (Volumes I-VIII).

The farming systems in Table 4 are roughly ranked according to altitude. The systems of the mountain valleys, (Nos. 2 and 4), are river-fed. While these are highly productive, the cold weather at higher altitudes makes the growing season late and short and largely restricts production to single cropping. The limited areas of land for irrigated agriculture in the narrow higher mountain valleys are intensively used. The warmer weather at lower altitudes (System 3, Meterhlam) allows double cropping and in some favoured areas in the Eastern zone, even three crops/year.

System 5 is typical of many mid-level mountain areas. These include the greater part of the farming areas fed by underground water (kareze and wells) which are widespread through the Southern Mountains and Foothills, the Central Mountains and the Herat-Farah Lowlands. The difference between this and the other mountain-area systems, is that kareze or wells are the main water source and that water, not land is the limiting resource. This marginal

farming system is always at risk from erratic water supply. Farmers manage this problem by storing moisture in long fallows and by accepting relatively low yields on some marginal irrigated areas.

These water management techniques are not confined to kareze-fed irrigation. They are also widely practised at the lower ends of canal systems, or along the fringes where water availability is less reliable. The wide spread of this problem of unreliable water availability is reflected in the high proportion (60%+) of total irrigated area being classed as 'intermittently irrigated', as distinct from the single crop or double crop areas. Poor average crop yields are often cited as a contributing factor to food shortages. The use of high yielding crop varieties and greater use of fertiliser are widely promoted as means of increasing average crop yield and food production. However, such solutions do not tackle the fundamental cause of the problem, which is unreliable water supply and leave farmers at greater risk of poor crop performance under these conditions.

A wide variety of crops are grown throughout Afghanistan. Wheat is grown in every area. Fruit trees such as apricots, almonds and walnuts and grapevines are almost universally found. However, the climatic features of different areas are more or less favourable to individual crops, giving a ranking of suitability or importance of the various production opportunities. Table 5 sets out some of the principal crops grown in the various farming systems. These are presented largely in the order of importance within the system, though production in any area should not be seen to be restricted only to these crops.

Table 5 Principal products of the key farming systems

Region	District	Altitude masl	Principal products: Field crops	Fodder crops	Orchard crops
Eastern Mountains	Maydan Shah (No.4)	2000 to 3000	Potatoes, wheat, barley, rice	Clover, alfalfa	Apples, Stone fruits
	Nejrab (No.2)	1000 to 2000	Wheat, maize, beans, potatoes, onions	Clover, alfalfa	Apples, Stone fruits, Vines
	Mehterlam (No. 3)	500 to 1500	Wheat, rice, maize, opium, sugarcane, vegetables	Alfalfa, clover	Stone fruits, Pome fruits, Citrus, Vines
Southern Mt'ns/Foothills	Qara Bagh (No. 5)	1000 to 1500	Wheat, potatoes, maize, beans	Alfalfa, clover	Stone fruits, Apricots (dried), Almonds, Walnuts, Vines
Northern Foothills/Plains	Shulgara (No. 1)	500 to 1000	Wheat, potatoes, maize, beans, rainfed wheat/barley	Alfalfa, clover	Stone fruits, Nuts, Vines
Helmand Valley Sistan Basin	Arghandab (No. 7)	500+	Wheat, maize, beans, vegetables	Alfalfa, clover	Vines (grapes/raisins), Pomegranates, Almonds, Apricots dried,
	Nad-I Ali (No. 6)	500+	Wheat, opium, maize, cotton, vegetables	Alfalfa, clover	Pomegranates, Nuts, Vines

Source: Swedish Committee for Afghanistan. 1993. *Farming Systems in Afghanistan* (Volumes I-VIII).

2.3 THE IMPACT OF OPIUM

Opium poppy is a traditional crop in Afghanistan. Grown in small plots, it has been widely used in many parts of the country as the only available medicine for a range of ailments. It has also long been part of the farming system in high altitude hardship areas, where it plays a role in helping people cope with the endemic winter food shortages.

The expansion of poppy production can be linked to successive failures of governance. The two most important were the Soviet invasion in 1979 and the mujahideen civil war period (1992-96) which followed the fall of the Najibullah government. As a consequence of the collapse of the civil economy, opium became a means of exchange providing access to essential resources. Despite substantial support from the international community, many Afghan families have found that the difficulties of subsistence farming in a ruined economy have forced them into new survival strategies. The growing of opium is one of the few

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ACRONYMS AND ABBREVIATIONS

APB	Afghanistan Programming Body
ASG	Afghan Support Group
BVW	Basic Veterinary Worker
CBO	Community Based Organisation
CFW	Cash-for-work
EU	European Union
FAO	Food & Agriculture Organisation
FFW	Food-for-work
IDP	Internally Displaced Person(s)
IP	Implementing Partner
MADERA	Mission d'Aide au Développement des Economies Rurales
masl	metres above sea level
NGO	Non-government organisation
PCP	Principled Common Programming
RCB	Regional Coordination Board
UNDCP	United Nations Drug Control Programme
UNDP	United Nations Development Programme
WFP	World Food Programme

GLOSSARY OF TERMS

BVW	A Basic Veterinary Worker is (usually a woman) trained to provide basic animal health care services (injections, drenching etc) on a fee-for-service basis
Kareze	Man-made underground tunnel to tap ground water for irrigation
Kuchi	Nomad. The *kuchis* comprise an estimated 7% to 10% of the Afghan population
Mirab	Water bailiff (irrigation water manager) appointed and paid by the community
Wakil	Government appointed irrigation water manager